SHUMSKIY, K.D., fel'dsher (Kiyev)

Kiev Medical and Obstetrical School; on the 120th anniversary of its founding. Fel'd.i akush. 27 no.7:38-42 Jl '62. (MIRA 15:9)
(KIEV--MEDICAL COLLEGES)

SHRIMSKIY, K.D., fel'dsher (Kiyev)

Poisoning of children with the seeds of poisonous plants.
Fel'd. i akush. 28 no.8:40-42 Ag'63 (MIRA 16:12)

SHUMSKIY, K. P., Doc Tech Sci -- (diss) "Condensation of Water Vapor in a Rarefied ~~Atmosphere~~ Medium (Condensation into a Solid State)." Mos, 1958. 39 pp (Min Higher Ed USSR. Mos Inst of Chem Machine ~~Constr~~ Building), 200 copies (KL 40-58,114)

SHUMSKIY, K.P. [Shumski, K.P.], kand.fiz.-mat.nauk

Rate of motion of paragaseous mixtures in sublimation condensers.
Vestsi AN BSSR Ser. fiz.-tekh. nav. no.3:5-10 '58. (MIRA 11:10)
(Water vapor) (Condensation)

POMERANTSEV, A.A., prof., doktor fiz.-mat. nauk; SHUMSKIY, K.P., kand. fiz.-mat. nauk.

Theory of nozzles for high vacuum steam jet pumps. Sbor. st. NIIKHIMMASH no.22:81-91 '58. (MIRA 11:6)
(Vacuum pumps)

SHUMSKIY, K.P., kand.fiz.-mat.nauk

Mechanism of the condensation of water vapor to a solid state. (MIRA 12:1)
Sbor.st.NIIKHIMMASH no.24:3-41 '58.
(Water vapor) (Condensation)

SHUMSKIY, K.P., kand.fiz.-mat.nauk

Thermophysical characteristics of vapor condensation in a rarefied medium. Sbor.st.NIIKHIMMASH no.24:42-60 '58. (MIRA 12:1)

(Water vapor) (Vacuum) (Condensation)

SHUMSKIY, K.P.

Particular aspects of the method of studying the process of condensing vapor to a solid in a vacuum. Sbor.st.NIIKHIMMASH no.24:61-70 '58. (MIRA 12:1)
(Condensation) (Water vapor)

SOV/64-59-3-15/24

14(1)
AUTHOR: Shumskiy, K. P., Candidate of Physico-mathematical Sciences

TITLE: Investigation of the Working Process in the Condensers of Sublimation Plants (Issledovaniye rabochego protsessa v kondensatorakh sublimatsionnykh ustanovok)

PERIODICAL: Khimicheskaya promyshlennost', 1959, Nr 3, pp 70-73 (USSR)

ABSTRACT: At present the possibilities for an industrial application of sublimation-drying methods (SD) for fine-disperse dyestuffs (for color films) are examined. The (SD) is carried out in dryers closed hermetically, at a pressure below triple-point (4.58 mm Hg) by means of evaporating the solidified liquid at temperatures below melting point. Since the condensation of water steam (WS) has been investigated little, experiments were made for finding a method for the computation of sublimation condensers. The (WS) condensation with the development of ice was examined in pure (WS), and with air or other not condensed gases (H_2, He, CO_2, CH_4, CF_2Cl_2) under dynamic and static conditions. Among other things it could be observed that the condensation rate in the dynamic system increases

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with the steam pressure on the condenser inlet, much quicker than it does in the static system. The molecules of the uncondensed gases partly rebound on the ice surface and partly they are absorbed. The movement of the rebounding molecules facilitates the (WS) condensation. The construction choice of a condenser will depend on the shifting rate of the (WS) from the dryer to the cooling surface. Due to the experimental results and experience of several works, this can be expressed by means of the equation

$f = a^{P_c}$ (5), (a - parameter, depending on the property of the steam and on the construction of the condenser, P_c-value equal to the partial steam pressure in the dryer in mm Hg). The ratio between the duration of the work and the diameter is of great importance for condensers (Fig 4, function of the partial steam pressure of this ratio). There are 4 figures and 3 references, 2 of which are Soviet.

ASSOCIATION: NIIKhIMMASh (NIIKhIMMASh)

SHUMSKIY, K.P., kand. fiz.-matem.nauk

Theoretical principles of the method for calculating vacuum condensers. Khim. mash. 3 no.3:11-16 My-Je '59. (MIRA 12:12)
(Condensers (Vapors and gases))

SHUMSKIY, K. P.

"On the Theory of Phase Conversions in Vacuum."

Report submitted for the Conference on Heat and Mass Transfer, Minsk, BSSR, June 1961.

5-9

PHASE I BOOK EXPLOITATION SOV/5844

Shumskiy, K. P.

Vakuumnyye kondensatory khimicheskogo mashinostroyeniya (Vacuum Condensers in the Chemical-Machine Industry) Moscow, Mashgiz, 1961. 334 p. Errata slip inserted. 6500 copies printed.

Reviewer: N. I. Plekhan, Engineer; Ed.: I. I. Salamatov, Engineer; Ed. of Publishing House: N. P. Yevstaf'yeva; Tech. Ed.: A. F. Uvarova; Managing Ed. for Literature on Chemical and Textile Machine Building: V. I. Rybakova, Engineer.

PURPOSE : This book is intended for technical personnel and scientific workers in industry. It may also be useful to students specializing in chemical-machine design.

COVERAGE: Problems in the vacuum condensation of water vapor directly into the solid state are discussed. The constructions of basic types of units for this process are analyzed. Systematized data are included on adsorption and condensation of

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water vapor on charged particles and on positively active molecules. A method for designing sublimation condensers for the chemical industry has been developed which makes possible the construction of highly productive units. The generalized experimental data included in the book were gathered mainly at the Nauchno-issledovatel'skiy i konstruktorskiy institut khimicheskogo mashinostroyeniya (NIIKhIMMASh)—All-Union Design and Scientific Research Institute of Chemical Machinery—at the "Kompressor" Plant, and at the Sumskoy zavod imeni Frunze—Sumy plant imeni Frunze. No personalities are mentioned. There are 105 references: 71 Soviet, 23 English, 9 German, 1 French, and 1 unidentified.

TABLE OF CONTENTS:

S/184/61/000/005/003/009
D041/D113

AUTHOR: Shumskiy, K.P., Candidate of Physical and Mathematical Sciences

TITLE: New principle of building equipment for the volumetric condensation of liquid vapors in a vacuum

PERIODICAL: Khimicheskoye mashimostroyeniye, no. 5, 1961, 29-33

TEXT: The article deals with investigations conducted at NIIKhIMMASh on the condensation of water vapor into ice in the presence of inert gases. The study was carried out in order to develop a design and a calculation method for vacuum condensers. The experiments revealed that the vapor condensation process of a vapor-gas mixture below the triple point is characterized by the energy loss of the gas molecules on contact with the solid cooled surface. The gas molecules are reflected from the cooled surface with insufficient energy because so-called non-elastic reflection takes place. The more atoms the molecule contains, the easier it is for the molecule to re-

Card 1/3

SHUMSKIY, K.P.

Condensation of water vapor to the solid state in a rarefied medium. Zhur.tekh.fiz. 31 no.8:991-1000 Ag '61. (MIRA 14:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy i konstruktorskiy institut khimicheskogo mashinostroyeniya, Moskva.
(Condensation)

BELEVTSEV, G.A.; GAVRILENKO, N.G.; GRINENKO, I.M.; KOROSTIK, P.O.; KOTEL'NIKOV, I.V.; KRASAVTSEV, N.I., kand. tekhn. nauk; MISHCHENKO, N.M.; POPOV, N.N., kand. tekhn. nauk; SEMIK, I.P., kand. tekhn. nauk; TOTSKIY, G.P., kand. tekhn. nauk; SHESTOPALOV, I.I.; Prinimali uchastiye: SOLDATKIN, A.I.; SOLOMKO, V.P.; SOLOMATIN, A.M.; BOLOTSKIY, D.V.; ZAPOROZHETS, N.P.; BESSCHASTNYY, A.Ye.; SHVETS, N.Kh.; LIKHUNIN, S.D.; SHUMSKIY, L.B.; VAS'KOVICH, N.A.; YEROKHINA, A.I.; GELYUKH, B.A.

Desulfuration of pig iron in a fast-revolving and continuous drum. Met. i gornorud. prom. no.4:3-5 Jl-Ag '65. (MIRA 18:10)

L 13123-66 EWT(1)/EEC(k)-2

ACC NR: AP5026918 SOURCE CODE: UR/0185/65/010/010/1119/1122

AUTHORS: Vlokh, O. H. (Vlokh, G.); Lutsiv-Shums'kyy, L. P. (Lutsiv-Shumskiy, L. F.)

ORG: L'vov Order of Lenin State University im. I. Franko (L'vivs'kyy ordena Lenina der-huniversytet)

TITLE: The dispersion of the r'_{63} coefficient of the true electro-optical effect in $NH_4H_2PO_4$ crystals

SOURCE: Ukrayins'kiy fizychnyy zhurnal, v. 10, no. 10, 1965, 1119-1122

TOPIC TAGS: ammonium phosphate, electrooptic effect, piezoelectric crystal, photoelasticity

ABSTRACT: A static method with application of mechanical stresses was used to obtain the dispersion of the piezo-optical stress coefficient π_{66} and the r'_{63} coefficient of the true electro-optical effect in the visible spectrum. An UM-2 monochromator served as the source of monochromatic light; the detector was a FEU-29 photomultiplier with a M-95 microammeter. The measurements were conducted at room temperature. A special device provided the uniform compression of the ADP crystal along the [110] direction of a sample cut in the form of a right prism

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L 13123-66

ACC NR: AP5026918

13.243 mm along the [110], 17.48 mm along the [110], and 11.093 mm along the [001]. The values of r_{63} at a wavelength of 556 mμ obtained by the static method are in good agreement with those obtained by the dynamic method at frequencies somewhat higher than the fundamental resonance frequency. The agreement of these results confirms the reversibility of both methods and the phenomenological connection of the electro-optical properties of crystals with their piezo-electric and photo-elastic properties. Orig. art. has: 4 figures and 3 formulas.

SUB CODE: 20/ SUBM DATE: 28Nov64/ NR REF SOV: 003/ OTH REF: 003

Card 2/2 MW

SHUMSKIY, M.I., starshiy elektromekhanik

Bipolar operation of a direct control relay. Avtom., telem.i sviaz' 6 no.1:25 Ja '62. (MIRA 15:3)

1. Novomoskovskaya distantsiya signalizatsii i svyazi Moskovskoy dorogi.
(Railroads--Electric equipment)

L 18238-65 EWT(m)/EWP(w) AFWL/SSD EM

ACCESSION NR: AP4048302 S/0146/64/007/005/0164/0170

AUTHOR: Shumskiy, M. P.

TITLE: Calculation of manometer springs

SOURCE: IVUZ. Priborostroyeniye, v. 7, no. 5, 1964, 164-170

TOPIC TAGS: Bourdon tube, manometer, manometer spring

ABSTRACT: An approximate general solution of the problem of the stresses and travel of a manometer spring (Bourdon tube) is presented. The solution differs from the well-known Ritz solution in that no wall-thickness limitation is imposed and the stresses are determined with the same accuracy as the spring-end travel. The well-known energy solution of the problem of the relative unbending angle of a thin-walled tube is extended over tubes with thicker walls. The new method yields results close to those of W. Wuest's method (VDI Forschungsheft 489, v. 28, no. B, 1962) applied to thin-walled flat-oval-section tubes. Orig. art. has:

Card 1/2

L 18238-65
ACCESSION NR: AP4048302

2 figures, 24 formulas, and 1 table.

ASSOCIATION: Tomskiy politekhnicheskiy institut (Tomsk Polytechnic Institute)

SUBMITTED: 25Feb64 ENCL: 00

SUB CODE: GC, IE NO REF SOV: 003 OTHER: 002

Card 2/2

L 04443-67 EWT(d)/FSS-2/EWT(1)/EWP(m)/EEC(k)-2

ACC NR: AP6022060 SOURCE CODE: UR/0146/66/009/003/0089/0092

66
B

AUTHOR: Shumskiy, M. P.; Ivanov, Yu. Ye.

ORG: Tomsk Polytechnic Institute (Tomskiy politekhnicheskiy institut)

TITLE: Selection of gyromotor rotor shape to assure minimum aerodynamic drag

SOURCE: IVUZ. Priborostroyeniye, v. 9, no. 3, 1966, 89-92

TOPIC TAGS: gyroscope system, rotor, aerodynamic drag moment, pneumatic device

ABSTRACT: The problem of reducing the moment of aerodynamic drag is considered under the condition that the parameters determining accuracy be preserved. Hence the aerodynamically optimum rotor is sought from the set of rotors having a given moment of inertia and size. The problem of finding a function passing through two given points and yielding a minimum functional is solved making use of the Euler formula. On the basis of the derived formula, optimum profiles passing through one of the given points at a given angle may be plotted graphically. The problem of finding the optimum form of a uniform rotor is then solved in a similar manner and yields a first-order equation. The optimum form of transition from the cylindrical opening to the end face of the rotor, and the optimum form of the diaphragm of a pneumatic gyromotor are considered as examples. Three variations of refinement of aerodynamic properties of a rotor are shown graphically, one determined from the derived formulas, two formed by straight bevels at 45 and 15°. It is concluded that when it is important to reduce aero-

UDC: 528.526.2

Card 1/2

L 04443-67

ACC NR: AP6022060

D.

dynamic drag the straight bevel can be replaced by a rounded one of optimum form. Orig. art. has: 14 formulas and 2 figures.

SUB CODE: 17, 20/ SUBM DATE: 27Apr65/ ORIG REF: 003

Card 2/2 ocp

KOMOV, L.V., inzhener (Syzran'); SHUMSKIY, M.Yu., inzhener (Syzran').

Apparatus for automatic pipe welding in sections. Stroi. pred.neft.prom. 1 no.10:26-27 D '56. (MLRA 10:2)

(Electric welding) (Petroleum--Pipelines)

SHUMSKIY, N., inzh.

Get the equipment well prepared at grain receiving stations of eastern Kazakhstan. Muk.-elev.prom. 26 no.8:3 Ag '60. (MIRA 13:8)

1. Upravleniye khleboproduktov Vostochno-Kazakhstanskoy oblasti.
(Kazakhstan--Grain elevators)
(Grain--Handling machinery)

SHUMSKIY, N., inzh.-dispecther

We prepared the seed grain well and on time. Muk.-elev.prom. 27 no.5:28-29 My '61. (MIRA 14:6)

1. Vostochno-Kazakhstanskoye upravleniye khleboproduktov. (Grain)

[redacted]

We are well prepared to receive the new grain. Ukr.-elev. prom. 27 no.7:27 J '61. (MIRA 15:2)

(Granaries)

SHUMSKIY, N. (Ust'-Kamenogorsk)

Our assumed obligations in preparing the equipment have been fulfilled. Muk.-elev. prom. 29 no.9:27 S '63.
(MIRA 17:1)

SHUMSKIY, N. (Ust'-Kamenogorsk)

Pay due attention to the training of specialists. Muk.-elev. prom. 29 no.7:28 Jl '63. (MIRA 17:1)

MOROZOV, V.M.; SHUMSKIY, N.G.

"La raison," no.6 (July), 1953. Paris; journal of scientific psychopathology. Reviewed by V.M.Morozov, N.G.Shumskii. Zhur. nevr. i psikh. 54 no.6:599-602 Je '54. (MLRA 7:7)
(PSYCHOLOGY, PATHOLOGICAL--PERIODICALS)

SHUMSKIY, N.G.

"La Raison" journal of scientific psychopathology, no.7: (Dec.) 1953. no.8 (May) 1954. Paris. Reviewed by N.G.Shumskiy. Zhur. nevr. i psikh.55 no.10:797- '55. (MLRA 8:11)
(PSYCHOLOGY, PATHOLOGICAL--PERIODICALS)

MOROZOV, V.M.; SHUMSKIY, N.G.

Review of "La Raison, Cahiers de psychopathologie scientifique," no.2-5. [Journal of Scientific Psychopathology, No.2-5, Paris] Henri Wallou, chief editor; Louis de Guillant, responsible editor. Zhur.nevr.i psikh. 54 no.1:55-63 Ja '54. (MLRA 7:1)
(Psychology, Pathological--Periodicals)

SHUMSKIY, N.G.

Clinical aspects of paraphrenic (delusional paranoid) schizophrenia [with summary in French]. Zhur. nevr. i psikh. 58 no.4:462-470 1958 (MIRA 11:5)

1. Kafedra psikhiatrii (zav. - prof. A.V. Snezhnevskiy) Tsentral'nogo instituta usovershenstvovaniya vrachey, Moskva.

(SCHIZOPHRENIA, psychol.
paraphrenic delusional paranoid, psychodynamics (Rus))
(PARANOIA, psychol.
psychodynamics (Rus))

SHUMSKIY, N. G., Candidate Med Sci (diss) -- "On the clinical treatment of paraphrenic (fantastic-paranoid) schizophrenia". Moscow, 1959. 15 pp (Min Health USSR, Central Inst for the Advanced Training of Physicians), 200 copies (KL, No 22, 1959, 123)

NADZHAROV, R.A.; SHUMSKIY, N.G.

Differential diagnosis between schizophrenia and cyclothymia; sluggishly developing schizophrenia and cyclothymia with an obsessional syndrome. Vop. psikh. no. 3:184-197 '59. (MIRA 13:10)

(SCHIZOPHRENIA) (MANIC-DEPRESSIVE PSYCHOSES)

SHTERNBERG, E.Ya.; SHUMSKIY, N.G.

Various forms of depression in old age. Zhur.nevr.i psikh. 59 no.11: 1291-1298 '59. (MIRA 13:3)

1. Institut psikhiatrii (dir. - prof. D.D. Fedotov) AMN SSSR, Moskva.
(DEPRESSION in old age)

NADZHAROV, R.A.; SHUMSKIY, N.G.

Latent epilepsy. Vop. psikh. no.4:90-105 '60. (MIRA 15:2)
(EPILEPSY)

BORINEVICH, V.V.; GOFMAN, A.G.; SHUMSKIY, N.G. (Moskva)

Methodology of supporting antabuse treatment under the conditions of a spychoneurological dispensary. Trudy Gos. nauch.-issl. inst. psikh. 38:306-317 '63 (MIRA 16:11)

MOROZOVA, T.N.; SHUMSKIY, N.G.

Endogenous depressions and external factors. Zhur. nevr. i psikh. 63 no.10:1515-1521 '63. (MIRA 17:5)

1. Kafedra psikhiatrii (zav. - prof. A.V. Snezhnevskiy) TSentral'nogo instituta usovershenstvovaniya vrachey, Moskva.

LEYBOVICH, F.A.; SHUMSKIY, N.G.

Clinical and electroencephalographic studies on aged patients with cyclic depression. Zhur. nevr. i psikh. vol. 64 no.5:746-754 '64. (MIRA 17:7)

1. Institut psikhiatrii AMN SSSR i kafedra psikhiatrii TSentral'nogo instituta usovershenstvovaniya vrachey, Moskva.

SHUBKIN, V.N.

Delusion of false recognition (illusion of doubles, Capgras syndrome, in paranoid schizophrenia. Zhur. nevr. i psikh. 64 no.6:883-889 '64. (MIRA 17:12)

1. Nauchno-issledovatel'skiy institut obshchey i sudebnoy psikhiatrii imeni Serbskogo, Moskva.

SHUMSKIY, N.G.

Some most frequently encountered pictures of circular depressions in old age. Zhur. nevr. i psikh. 65 no.4:558-566 '65.
(MIRA 18:5)

1. Kafedra psikhiatrii (zaveduyushchiy - prof. V.M. Morozov) TSentral'nogo instituta usovershenstvovaniya vrachey, Moskva.

SHUSHIY, N. P.

"Investigations of the Characteristics of a Flat Valve of the Nozzle-Flap Type."

report presented at the Scientific Seminar on Pneumo-Hydraulic Automation, 28-29 May 1957, at the Inst. for Automation and Remote Control (IAT) Acad. Sci. USSR.

Avtomika i Telemekhanika, 1957, vol. 18, No. 12, pp. 1148-1150, (author SEMIKOVA, A. I.)

Shumskiy, N.P.

28(1) PHASE I BOOK EXPLOITATION SOV/2702

Akademiya nauk SSSR. Institut avtomatiki i telemekhaniki.
Seminar po pnevmogidravlicheskoy avtomatike. 1st, Moscow, 1957

Statemy, ustroystva i elementy pnevmo- i gidroavtomatiki; [sbornik]
(Pneumatic and Hydraulic Circuits Devices, and Elements in
Automation; Collection of Papers) Moscow, Izd-vo AN SSSR,
1959. 233 p. Errata slip inserted. 2,700 copies printed.

Resp. Ed.: M. A. Aizerman, Doctor of Technical Sciences, Professor;
Ed. of Publishing House: A. A. Fal'; Tech. Ed.: T. P. Polyakova.

PURPOSE: This collection of papers is intended for scientific research workers and engineers in the field of design and construction of pneumatic and hydraulic equipment and accessories for automation.

COVERAGE: This collection contains papers read at the Seminar on Pneumatic and Hydraulic Devices for Automation, May 28, 1957; The collection is divided into the following three groups: 1) newly developed pneumatic and hydraulic circuits 2) pneumatic and hydraulic devices, including regulating units, transmitters and transducers, actuating mechanisms, special-purpose devices, and auxiliary equipment and 3) elements of pneumatic and hydraulic devices for automation, such as controlled and permanent nozzles and diaphragms. No personalities are mentioned. References follow several of the papers.

Table of Contents

Andreyeva, Ye. A. (Moscow). Calculating the Static Characteristics of Back-pressure Type Elements 172
This paper deals with a theoretical analysis of back-pressure type elements. Flow of fluid, pressure distribution on plates, and general characteristics are discussed.

Shumskiy, N.P. (Moscow). Results of Experimental and Theoretical Investigations of Back-pressure Type Control Devices 181

Boyachuk, A.V. (Moscow). High-velocity Laminar Air Flow in Plat Capillary Channels 194
This paper discusses air flow in flat capillary channels at varying pressures. The flow rate is experimentally investigated and results shown graphically. Charts to be used for determining resistance coefficients and flow rates are presented.

Kichin, I. N. (Moscow). Nozzle Clogging and Methods of Combating It 205
The tendency of certain working fluids toward nozzle and slit clogging is examined. Minimum dimensions of nozzle and slit sections at which the fluid flow rate remain stable are determined. Some practical methods of combating clogging are presented.

Diaphragms

Afanas'yev, V.V. (Moscow). On Variation of Effective Areas of Fabric Diaphragms 216
Changes in the magnitude of effective areas of corrugated diaphragms during the stroke are analyzed and their significance in the design of a KSTsMA pneumatic regulator discussed.

Mach, Yu. I., and G. P. Stepanov (Moscow). Investigation of Characteristics of Diaphragms Used in Sensitive Elements of Regulators 223
Characteristics of rubberized-fabric diaphragms made from various materials are discussed. The amount of hysteresis in relation to the stroke and the influence of the temperature of the surrounding medium are investigated. Test results of beryllium-bronze diaphragms are presented.

[redacted], G. B. Cand. Tech. Sci.

Dissertation: "[redacted] Fundamentals and Methods of Designing Grain Elevators." Moscow Technological Inst of the Food Industry, 1[redacted] Jun 47.

SO: Vechernyaya Moskva, Jun, 1947 (Project #17836)

SHUMSKIY, O.D.

SHUMSKIY, O.D., dots., kand. tekhn. nauk.

Organization of the storing and processing of grain in the Chinese People's Republic. Trudy MTIPP no.7:126-141 '57. (MIRA 10:12)
(China--Grain--Storage) (China--Grain milling)

VORONTSOV, Oleg Samoylovich, dots., kand. tekhn. nauk; Priniali uch.: SHUMSKIY, O.D., dots. kand. tekhn. nauk; CHERNILOV, L.O., inzh., prepodavatel'; RYSIN, P.I., prepodavatel'; TARUTIN, P.P., starshiy nauchnyy sotr., kand. tekhn. nauk, red.; KRIVYAKIN, B.I., red.; GOLUBKOVA, L.A., tekhn. red.

[Elevators, granaries, and grain processing enterprises] Elevatory, sklady i zernopererabatyvaiushchie predpriiatiia. Pod red. O.D. Shumskogo i P.P. Tarutina. Moskva, Izd-vo tekhn. i ekon. lit-ry po voprosam khleboproduktov. Pt.1. [Types, constructional features and operation] Tipy i konstruktsii sooruzhenii i ikh ekspluatatsiia. 1961. 269 p. (MIRA 14:8)

1. Novocherkasskiy elevatornyy tekhnikum (for Chernilov). 2. Moskovskiy politekhnikum (for Rysin)
(Grain elevators) (Flour mills)

SHUMSKIY, P., starshiy leytenant

Testing the line of sighting at zero settings. Voen. vest. 42 no.8:109 Ag '62. (MIRA 15:7)

(Mortars (Ordnance))

SHUMSKIY, P. A.

"Contemporary Glaciation of the Soviet Arctic," Voprosy Geografii, 4th Symposium, 1947.

SHUMSKIY, P. A.

SHUMSKIY, P. A. Energiia oledeneniia i zhizn' lednikov. Moskva, Geografgiz, 1947. 58 p.
DLC: Unclass.

SO: LC, Soviet Geography, Part I, 1951, Uncl.

Translation: "The Power of Glaciation and the Life of Glaciers"

SHUMSKIY, P. A.

USSR/Geophysics - Ice Formation 1 Nov 53

"Problem of the Passive Orientating Effect of a Solid Base Upon Growing Crystals," P. A. Shumskiy, Inst of Frost Science im Obruchev, Acad Sci USSR

DAN SSSR, Vol 93, No 1, pp 51-54

Describes ordering progress of crystals, in particular, ice setting upon a solid base, as e. g. wall of cracked glacier. Finds a relation between temp of base during crystallization and type of orientation of growing ice crystals which

275T60

facilitates the establishment of temp of ores during ice formation. Presented by Acad V. A. Obruchev 7 Sep 53.

SHUMSKIY, P.A. doktor geograficheskikh nauk

Microscopic research method for the structure of frozen ground. Mat.po lab.issl.merzl.grunt. no.2:111-124 '54. (MLRA 8:8)

1. TSentral'naya laboratoriya Instituta merzlotovedeniya Akademii nauk SSSR.

(Frozen ground)

SHUMSKIY, P.A., doktor geograficheskikh nauk

Directions for determining pressure of gases occluded within ice. Mat.po lab.issl.merzl.grunt. no.2:215-231 '54. (MLRA 8:8)

1. TSentral'naya laboratoriya Instituta merzlotovedeniya Akademii nauk SSSR.

(Ice)

SHUMSHIY, P.A.

USSR.

6.4-265 551.574.1 551.311.1 548

Shumshiĭ, P. A., Stoenie prirodnykh l'dov. [Structure of natural ice.] *Vsesoiuznoe Geograficheskoe Obshchestvo, Izvestiia*, 86(1):20-33, Jan./Feb. 1954. 4 figs. DLC—The author considers the mineralogical and crystallographic characteristics o ice, the growth of ice crystals and the formation of ice in relation to waters of origin, a comparison between ice formed in the free atmosphere and that which forms on solid surfaces, the petrographic study of ice and the properties and types of congelated ice. *Subject Headings:* 1. Ice formation 2. Ice crystal growth 3. Crystallography.—*I.L.D.*

SHUMSKIY, P. A.

"Problems & Methods of Glaciological and Geocryological Studies"

U.S. National Committee, IGY, National Acad. of Sci., Sept. 55

SHUMSKIY, P A

B/5
551.325
.351

Osnovy strukturnogo ledovedeniya; petrografiya presnogo l'da kak metod
glyatsiologicheskogo issledovaniya (principles of structural glaciology)
Moskva, Izd-vo Akademii Nauk SSSR, 1955
491 p. illus., diagrs., tables.
At head of title: Akademiya Nauk SSSR. Institut Merzlotovedeniya.
"Literatura": p. 468-(477)

Shumskiy, P.A.

USSR/ Geography - Arctic Ocean

Card 1/1 Pub. 124 - 5/45

Authors : Shumskiy, P. A., Dr. of Geogr. Sc.

Title : Study of the ice of the northern Arctic Ocean

Periodical : Vest. AN SSSR 2, 33-38, Feb 1955

Abstract : Scientific data are presented on the strength, structure, age, history of formation and distribution of ice in the northern parts of the Arctic Ocean. The data were collected by special expeditions of the Arctic Institute of the Academy of Sciences USSR during a period of many years of research work. Table; drawing.

Institution : .....

Submitted : .....

SHUMSKIY, P.A.

USSR/ Physics - Ice crystals

Card 1/1 Pub. 86 - 26/38

Authors : Stempnevskiy, V. M., Cand. Tech. Sc.; and Shumskiy, P. A., Dr. Geog. Sc.

Title : Spiral crystals of ice

Periodical : Priroda 44/7, 113 - 114, Jul 1955

Abstract : An instance is related of a spiral formation of ice in November of 1953 on a pond near a railway station 40 km from Moscow. An explanation is offered of the mechanics of this odd formation. Illustration.

Institution : .....

Submitted : .....

SHULEIKIN, P. A. (G. A. Avsyuk and K. K. Markov)

Geographical observations in an Antarctic "oasis". (In Russian)
Moscow, U.S.S.R. Acad. Sci., 1956, 69p., map.

AVSYUK, G.A.; MARKOV, K.K.; SHUMSKIY, P.A.

Cold desert in the Antarctic. Izv.AN SSSR.Ser.geog.no.4:16-25 Jl-Ag '56. (MLRA 9:10)

1.Institut geografii Akademii nauk SSSR, Institut merzlotovedeniya Akademii nauk SSSR, Geograficheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta imeni M.V.Lomonosova.
(Antarctic regions)

SHUMSKIY, P.A., doktor geograficheskikh nauk.

Glaciological and geocryological studies in the Antarctic (first results of 40-day reconnaissance). Vest. AN SSSR 26 no.9:27-35 S '56. (MLRA 9:11)
(Antarctic regions--Ice)

AVSYUK, G.A.; MARKOV, K.K.; SHUMSKIY, P.A.

Geographic observations in an Antarctic "oasis." Izv.Vses.geog. ob-va 88 no.4:316-350 Jl-Ag '56. (MLRA 9:10)

(Antarctic regions--Physical geography)

SHUMSKIY, P. A.

Popov, I.V

5(4,5) PHASE I BOOK EXPLOITATION SOV/1655

Akademiya nauk SSSR. Komitet po geodezii i geofizike.

Tezisy dokladov na XI General'noy assemblaye Mezhdunarodnogo geodezicheskogo i geofizicheskogo soyuza. Mezhdunarodnaya assotsiatsiya nauchnoy gidrologii (Abstracts of Reports Submitted to the 11th General Assembly of the International Union of Geodesy and Geophysics. The International Association of Scientific Hydrology) Moscow, 1957. 101 p. /Parallel texts in Russian and English or French/ 1,500 copies printed.

No additional contributors mentioned

PURPOSE: This booklet is intended for hydrologists and civil engineers.

COVERAGE: This collection of abstracts covers reports presented at the 11th General Assembly of the International Union of Geodesy and Geophysics on hydrological, erosional, and glaciological processes. Studies related to problems of underground waters, snow, and rivers are also discussed. The abstracts are in Russian, with English or French translations. Those appearing in English are designated by a single asterisk; those in French by two. There are no references given.

Card 1/4

AVAILABLE: Library of Congress (GB653.A37)

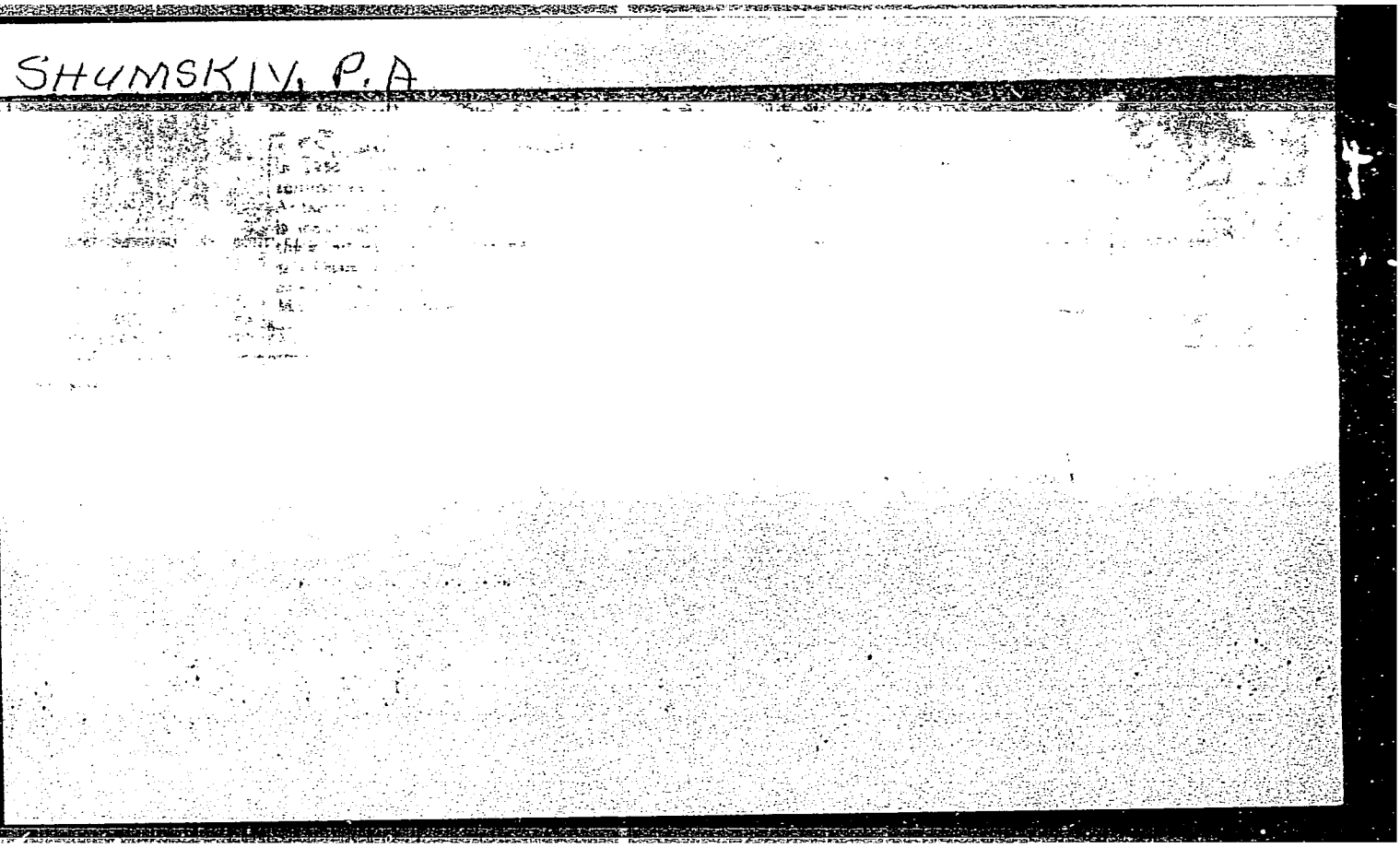
Card 4/4

MM/gmp
5-21-59

TSYTOVICH, N.A.; NERSESOVA, Z.A.; BOZHENOVA, A.P.; TATYUNOV, I.A.; DOSTOVALOV, B.N.; SHUMSKIY, P.A.; BAKULIN, F.G.; SAVEL'YEV, B.A.; ZHUKOV, V.F.; MARTYNOV, G.A.; VYALOV, S.S.; SHUSHERINA, Ye.P.

Physical phenomena and processes in freezing, frozen, and thawing soils; general comments. Mat. po lab. issl. merzl. grunt. no.3:7-114 '57. (MIRA 10:11)

(Frozen ground)



SHUMSKIY, P.A., doktor geograficheskikh nauk.

Investigation of the glacial cover of the Antarctica. Priroda 46 no.7:[illegible] '57. (MIRA 10:8)

1.Antarkticheskaya ekspeditsiya Akademii nauk SSSR, Mirnyy.
(Antarctic regions--Glaciers)

SHUMSKIY, Petr Aleksandrovich; GRAVE, N.A., doktor geograf.nauk, otv. red.; KONDRAT'YEVA, V.I., red.; VOYTKOVSKAYA, Ye.M., red.; PARNIKOV, Ye.S., tekhn.red.

[An outline of the history of the study of ground ice] Ocherk istorii issledovaniia podzemnykh l'dov. IAkutsk, IAkutskoe izd-vo, 1959. 52 p. (MIRA 13:4)
(Frozen ground)

SOV/30-59-2-22/60

AUTHOR: Shumskiy, P. A., Doctor of Geographical Sciences

TITLE: News in Brief (Kratkiye soobshcheniya)
Symposium of the Committee for Snow and Ice of the International Association for Scientific Hydrology (Simpozium Komissii snega i l'da Mezhdunarodnoy assotsiatsii nauchnoy gidrologii)

PERIODICAL: Vestnik Akademii nauk SSSR, 1959, Nr 2, pp 79-80 (USSR)

ABSTRACT: The Symposium was held in the small town of Chamonix (Shamoni) in the French Alps on the foot of the Montblanc from September 16 until September 24, 1958 and dealt with problems of the physics of ice movements in glaciers. Scientists from 15 countries took part who heard and discussed 42 scientific reports, 7 of which were delivered by the Soviet delegation. Among other scientists, V. N. Bogoslovskiy (USSR) reported on the relation between temperature conditions and glacier movement. Problems of organization of the further work in this field were discussed and it was decided to hold such a Symposium every 3 years. Finally the author states that the work was very fruitful and carried out in a friendly atmosphere. The members of the Soviet delegation met the members of the other

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News in Brief. Symposium of the Committee for Snow and Ice of the International Association for Scientific Hydrology

delegations very frequently at unofficial occasions. They visited the Geophysical Institute and the office of weather forecasting in Paris.

3(7) SOV/20-126-4-21/62

AUTHOR: Shumskiy, P. A.

TITLE: The Density of Glacier Ice (Plotnost' lednikovogo l'da)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 4, pp 767 - 770 (USSR)

ABSTRACT: In the introduction, the coefficient of compression, the average expansion coefficient, density at a pressure of 1 at, and the air inclusion are given according to the Boile-Mariotte law of glacier ice, and it is found that calculation of the density of this ice in an arbitrary glacier is possible only if the processes of expansion and compression of the ice take place elastically, and that its density depends only on external pressure and temperature. Basing upon these assumptions, formula (4) is developed for the density of the ice, and for depth, which belongs to a certain pressure, formula (5) is given. A diagram (Fig 1) shows two curves of the variation of density with depth, which were calculated according to the above formulas, for different initial densities (on the surface). A further diagram (Fig 2) shows the variations of density for ice, on the condition of equilibrium being established

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between the pressure of the enclosed air and the pressure of the layers of ice above it, and further also for snow, glacier snowfields, and ice within the range of the feeding of polar glaciers, and for ice within the range of ablation. The demand made in the introduction to this paper that compression and expansion be elastic is only for the case in which storage and melting of the ice do not take place too rapidly. If storage and melting proceed too quickly, the density distribution in the ice must be determined empirically. As an ansatz for the development of an empirical formula, the parabolic partial curve of n-th degree is taken (6), with the aid of which the dependence of density on depth may be approximated. Further, the dependence of pressure on depth is given by formula (7). Formulas are further given for the gradient of ice condensation with depth, compression at a given depth, for the gradient of relative compression, and further the age of the ice, the sinking-in rate of the ice, the rate of condensation and relative compression, as well as the gradient of the variation of penetration rate with depth. There are 2 figures.

The Density of Glacier Ice SOV/20-126-4-21/62

PRESENTED: January 19, 1959, by V. V. Shuleykin, Academician

SUBMITTED: January 17, 1959

Card 3/3

SHUMSKIY, P.A.; KARTASHOV, S.N.; KOTLYAKOV, V.M.; AVSYUK, G.A., otv.red.; OGANOVSKIY, P.N., red.

[Second Antarctic Continental Expedition; snow cover] Vtoraia Kontinental'naia Antarkticheskaia ekspeditsiia; snezhnyi pokrov. Moskva. (Materialy gliatsiologicheskikh issledovanii). No.4. [Field investigations in the zone of katabatic winds at the Vostok-I and Komsomolskaya Stations] Marshrutnye issledovaniia v zone stokovykh vetrov, na st.Vostok-I i na st. Komsomol'skaia. (MIRA 14:3) 1960. 123 p.

1. Akademiya nauk SSSR. Institut geografii.
(Antarctic regions--Snow)

TRESHNIKOV, Aleksey Fedorovich, kand.geograf.nauk. Prinimali uchastiye: MATVEYCHUK, Georgiy Ivanovich; CHUPIN, Nikolay Petrovich; ARALOV, Dmitriy Petrovich; TIKHOMIROV, Igor' Ivanovich, vrach-stomatolog; MANSUROV, Sergey Mikhaylovich; KRICHAK, Oskar Grigor'yevich, kand. geograf.nauk; SHUMSKIY, Petr Aleksandrovich, doktor geograf.nauk; SHESTERIKOV, Nikolay Pavlovich, mladshiy nauchnyy sotrudnik, gidrolog. DROZHZHINA, L.P., tekhn.red.

[Second Continental Expedition, 1956-1958; general description] Vtoraia kontinental'naia ekspeditsiia, 1956-1958 gg.; obshchee opisanie. Pod red. A.F.Treshnikova. Leningrad, Izd-vo "Morskoi transport," 1960. 205 p. (Sovetskaia antarkticheskaia ekspeditsiia, no.8). (MIRA 13:7)

1. Leningrad. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut. 2. Nachal'nik Vtoroy kontinental'noy ekspeditsii (for Treshnikov). 3. Zamestitel' nachal'nika Vtoroy kontinental'noy ekspeditsii po administrativno-khozyaystvennoy chasti; nachal'nik beregovoy bazy (for Matveychuk).

(Continued on next card)

TRESHNIKOV, Aleksey Fedorovich ---(continued) Card 2.

4. Glavnyy inzhener Vtoroy kontinental'noy ekspeditsii (for Chupin). 5. Nachal'nik otryada svyazi i radionavigatsii Vtoroy kontinental'noy ekspeditsii (for Aralov). 6. Starshiy vrach Vtoroy kontinental'noy ekspeditsii (for Tikhomirov). 7. Nachal'nik geofizicheskogo otryada Vtoroy kontinental'noy ekspeditsii (for Mansurov). 8. Nachal'nik aerometeorologicheskogo otryada Vtoroy kontinental'noy ekspeditsii (for Krichak). 9. Nachal'nik glyatsiologicheskogo i vnutrikontinental'nogo otryada Vtoroy kontinental'noy ekspeditsii. 10. Nachal'nik otryada pribrezhnoy gidrologii Vtoroy kontinental'noy ekspeditsii (for Shesterikov).

(Antarctic regions--Russian exploration)

SHUMSKIY, P.A., doktor geograf.nauk, red.; KAPLINSKAYA, L.G., red.; KOTLYAKOVA, O.I., tekhn.red.

[Second Continental Expedition, 1956-1958; glaciological research] Vtoraia kontinental'naia ekspeditsiia 1956-1958 gg.; gliatsiologicheskie issledovaniia. Pod red. P.A.Shumskogo. Leningrad, Izd-vo "Morskoi transport," 1960. 365 p. (Sovetskaia antarkticheskaia ekspeditsiia, no.10). (MIRA 14:1)

1. Leningrad. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut.
(Antarctic regions--Glaciological research)

SHUMSKIY, P.A., doktor geogr. nauk, red.; KAPLINSKAYA, L.G., red.; KOTLYAKOVA, O.I., tekhn. red.

[Materials of the Soviet Antarctic Expedition] Trudy Sovetskoi antarkticheskoi ekspeditsii, 1955-. Leningrad, Izd-vo "Morskoi transport." Vol.10. [Second Continental Expedition, 1956-1958; glaciological research] Vtoraia kontinental'naia ekspeditsiia, 1956-1958 gg.; gliatsiologicheskie issledovaniia. Pod red. P.A.Shumskogo. 1960. 365 p. (MIRA 14:12)

1. Sovetskaya antarkticheskaya ekspeditsiya, 1955-.
(Antarctic regions--Glaciological research)

S/169/61/000/010/019/055
D228/D304

AUTHORS: Lasarev, G. Ye., and Shumskiy, P. A.

TITLE: Preliminary results of gravimetric determinations of the ice-sheet thickness

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 10, 1961, 55, abstract 10V364 (V sb. Sov. antarkt. ekspeditsiya, 10, L., Morsk transport, 1960, 96-100)

TEXT: The data and procedure are given for determining the ice thickness by a gravimetric method via the comparison of gravity anomalies with the data on the depth of the ice floor obtained by means of seismic surveying and drilling. The plan position of the gravimetric stations and the radial profile of the ice sheet in the Mirnyy-Vostok area from the data of 1957 are cited. It is noted that the sub-ice surface of the central part of Eastern Antarctica has a bowl shape, the edge of the ice sheet extruding seawards for 200 km. The existence of a latitudinal range under the ice is postulated in an area of 220 - 300 km. The greatest

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Preliminary results of...

thickness of the ice sheet was noted 40 km to the north of the Vostok station and was equal to approximately 4700 m, the floor of the ice in this area being located almost 1250 m below sea-level. The analysis of errors in the gravimetric method for the original data in question was made with certain a priori assumptions. The errors do not exceed 100 m. 8 references. [Abstracter's note: Complete translation.]

Card 2/2

YEFIMOV, A.I.; SHUMSKIY, P.A.

Ground ice in the environs of Krest-Khal'dzhay on the Aldan River. Mat. k osn. uch. o merz. zon. zem. kory no.5:15-40 '60.
(MIRA 13:10)

(Krest-Khal'dzhay region--Frozen ground)

S/169/61/000/008/014/053
A006/A101

AUTHOR: Shumskiy, P. A.

TITLE: Basic results of investigating the Antarctic ice cover

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 8, 1961, 70-71, abstract 8V534 (V sb. "Sov. antarkt. ekspeditsiya, 9," Leningrad, "Morsk. transport", 1960, 126-170)

TEXT: The author presents basic, mainly qualitative conclusions, obtained after the selective processing of scientific materials submitted by the glaciological team operated under the author's supervision on the Antarctic continent during 1956-57. The conclusions are grouped by sections. In section one "morphology of the ice cover and the relief of the ice bed" data are discussed on the surface height and thickness of the ice cover (determined by the seismic method) over the radial profile from the Davis Sea to the Vostok station, at 172 points on the whole. The data are summed up in a table). Data are also presented on the relief of the ice cover bed and on the morphology of the proper ice cover. It depends mainly on the basic ice movement, which equilibrates more or less the arrival and break-up of the ice under concrete conditions of the under-

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Basic results of investigating ...

lying surface relief. In section two the author analyzes heat exchange processes separately for surface layers of the ice cover, internal sections of the ice cover and upper layers of the earth crust. These processes form the temperature conditions of the aforementioned layers. Systems of differential equations are given which are characteristic of heat and mass exchanges and make it possible to determine the temperature field in a snow-firn layer (compiled by V. N. Bogoslovskiy); formulae are also presented which show the connection between the mean annual temperature of the ice cover surface and the temperature of layers underneath the level of penetration of seasonal temperature variations; the formulae show also the dependence of the mean surface temperature on the distance from the sea coast and the absolute height. The section contains 6 distribution curves of temperature over a depth of 40 - 400 m. In section three "the snow cover and glacier feed" data are given on the distribution of feed of the Antarctic ice cover over the height and depending on the distance from the sea coast. Section four contains an analysis of processes of the formation and structure of upper ice cover layers. An equation is given for the thickness of snow describing the correlation of the volumetric weight, the depth of the layer and the pressure of vertical layers; another equation (derived by P. A. Shumskiy) for the ice thickness shows also the correlation of the volumetric weight, the depth

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of the layer and the pressure of overlying layers and temperature. It is mentioned that formulae were derived to calculate the age of snow, firn and ice at any depth, the speed of their sinking, packing and compression at any depth, and also the gradients of increment of the pressure, packing and compression with the depth. Section five "deformation of ice and the structure of depth sections of the ice cover" is mainly based on experiments on the deformation of ice with investigations of its structure prior to and after deformation. "Movement of the ice cover" is discussed in section six and is based on a theory developed by P. A. Shumskiy. Basic equations are given of the ice cover movement, and their analysis is presented. In the conclusive section the author deals with some problems of geological activity, history and contemporary evolution of glaciation.

I. Nekrasov

[Abstracter's note: Complete translation]

Card 3/3

SHUMSKIY, P.A.

Origin of ground-ice wedges. Trudy Inst.merzl.AN SSSR 16: 81-97 '60. (MIRA 13:4)
(Arctic regions--Frozen ground)

BUGAYEV, V.A., prof., otv. red.; SHUMSKIY, P.A., prof., red.; GUSEV, A.M., prof., red.; LAPINA, I.Ya., red.; MEL'NIKOVA, N.B., red. izd-va; GOLUB', S.P., tekhn. red.

[Antarctica; reports of the commission] Antarktika; doklady komissii 1960. Moskva, Izd-vo Akad.nauk SSSR, 1961. 85 p. (MIRA 14:12)

1. Akademiya nauk SSSR. Mezhvedomstvennaya komissiya po izucheniyu Antarktiki.

(Antarctic regions)

SHUMSKIY, P. A.

"Glaciology of the Antarctica."

To be submitted for the 10th Pacfic Science Congress, Honolulu, 21 Aug - 6 Sep 1961.

Institute of Permafrost Studies.

SHUMSKIY, P.A.

9

PHASE I BOOK EXPLOITATION SOV/5034

Akademiya nauk SSSR. Institut merzlotovedeniya

Issledovaniya po fizike i mekhanike merzlykh gruntov (Investigations in Frozen-Ground Physics and Mechanics) no. 4, Moscow, 1961. 251 p. Errata slip inserted. 1500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut merzlotovedeniya im. V. A. Obrucheva.

Resp. Eds.: Z. A. Nersesova and N. A. Tsytovich; Ed. of Publishing House: T. F. Nikolayeva; Tech. Ed.: V. V. Volkova.

PURPOSE: This collection of articles is intended for geocryologists and agriculturists.

COVERAGE: The collection was written by staff members of the Institut merzlotovedeniya, AN SSSR -- Institute of Permafrost Studies, AS USSR -- on the basis of their scientific research work conducted at the Laboratory of Physics and Mechanics of Frozen Ground. The articles in the first part

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S[illegible]/5354

[illegible] in [illegible] Physics (Cont.)

[illegible] with the physics of the cryogenic processes. [illegible] in this field were based on the [illegible] by I. A. [illegible], Doctor of Geological and Mineralogical [illegible] of the collection are of considerable [illegible] of frozen [illegible] and the [illegible] in Antarctica dealing with the [illegible] strength of frozen [illegible] flow of [illegible]. A new [illegible] are based on the data of [illegible] by S. S. V[illegible] during the second Soviet Antarctic Expedition [illegible] (1956-1958). References follow each article.

[illegible] OF CONTENTS:

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AVAILABLE: Library of Congress

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1-16-62

S/169/61/000/012/044/089
D228/D305

AUTHORS: Shumskiy, P. A., Kotlyakov, V. M., and Yevteyev, S. A.

TITLE: The glacier dome of Drigal'skiy Island

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 12, 1961, 62, abstract 12V438 (V sb. Glyatsiol. issledovaniya, no. 6, M., AN SSSR, 1961, 45-69)

TEXT: The dome of Drigal'skiy Island (D) has been studied during four Soviet Antarctic expeditions. D lies on a submarine bank whose depth is 65 - 70 m and has a circular outline. Its area is 204 km^2, the highest point is 327 m above sea-level, and the average ice thickness is 300 m. The coast is an ice scarp with a height of 23 - 46 m. On the northern slope, the surface is oval; it is described by the formula:

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The glacier dome of...

$$\frac{x^2}{a^2} + \frac{H^{1.845}}{b^{1.845}} = 1 \quad ,$$

where x is the distance of a point from the center of D, H is the height of the point, and a and b are the oval's semi-axes. D is supplied as a result of precipitation during cyclone invasions accompanied by strong N E. winds. In addition, a marked role in the alimentation is played by hoarfrost in view of the closeness of the open sea. Thanks to wind transportation, firstly, the accumulation is less than the amount of precipitation, and, secondly, there is more accumulation on the S W. leeward slope of D than on the N E. windward slope. Recalculated in terms of water, the accumulation equals 860 mm at the summit 980 mm at a height of 200 m on the S.S.W. slope, and only 590 mm on the N.N.E. slope. Towards the edge of D on the

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The glacier dome of

N.N.E. slope, the accumulation decreases to 130 mm. On an average for the island, it equals 604 mm. or 123 million tons a year. There was little snow in 1958, but much in 1957; 1956 was an average year. From the center towards the edge of D. the density and solidity of the snow increase from 0.37 to 0.45 g/cm^3 and from 8.1 to 18.6 kg/cm^2 respectively. Because of the moist winds, the snow's solidity is greater than on the mainland. Radiational crusts appear on the surface towards the end of winter. The zones of ice-formation shift southwards in accordance with the asymmetry in the accumulation and melting (there is more melting on the northern slope). Above 180 - 250 m. there is a zone of recrystallization and infiltration where 5 - 25% of the annual layer of snow (only the summer snow) is covered by melting; below, there is a cold infiltration zone where melting and firn-formation embrace 55 - 100% of the annual layer of snow. The existence of a zone of infiltration and congelation is possible on the north-east coast. There is no

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The glacier dome of ..

ablation zone, nor is there any liquid run-off. At the center of D, the conversion of snow into ice lasts for about 50 years and is completed at a depth of approximately 60 m, whereas at the edge it is concluded in 30 - 35 years at a depth of 20 25 m. Differences in the winter and summer firn layers are reflected in the ice layering detectable in the ice scarps. The "winter" recrystallized ice is porous and white, its crystals having a complex form. The "summer" infiltrational ice is transparent, blue and pore-impoverished, its crystals having a simple form. The growth gradient of crystals with depth is 0.114 mm/m for "winter" ice and 0.055 mm/m for "summer" ice. The crystal axes, of which 63 ... % have a nearly vertical alignment and 25 ... 35% have a nearly longitudinal direction, are regulated at the expense of movement. Only 4% of the crystals have their principal axes aligned in directions close to that of the transverse movement. "Winter" ice is better regulated than "summer" ice. The movement of ice relative to the center

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The glacier dome of...

of D increases towards its periphery from 0 to 30 m/yr. The magnitude of the horizontal acceleration of movement changes in two waves--to which, according to the theory of movement, the waves must correspond in velocity and even in the direction of the change in the height of the surface (a reduction of 115 cm/yr. at the edge of D, but an increase of 45 cm/yr. at the ice-divide). According to calculations from P. A. Shumskiy's formulas of movement, the discharge force comprises 23% of the whole propellent force, the remaining 77% belonging to the dif fluent force. The bed's coefficient of friction grows from 0.03 at the center of D to 0.05 at 2 km from the coast and then falls to zero at the sea edge. The glacier's gradient of tapering also correspondingly changes. Laminar movement is unique near the center of D; 1.5 km from its edge, block gliding constitutes 92% of its whole speed, this being practically 100% at the actual edge. The complete change of matter occurs during 1200 years. The expenditure of ice at the expense of movement is 277 million tons per annum, the mass deficit balance being

Card 5/6

SHUMSKIY, P.A.

Motion of glaciers. Dokl. AN SSSR 137 no. 1:79-82 Mr-Ap '61.
(MIRA 14:2)

1. Predstavleno akademikom D.I. Shcherbakovym.
(Glaciers)

SHUMSKIY, P. A.

"On the Theory of Glacier Variations."

Report presented at the Symposium on Variations on the Regime of Existing Glaciers, Overgurgl, Austria, 10-18 Sep 62

GRIGOR'YEV, Nikolay Filippovich; SHUMSKIY, P.A., doktor geogr. nauk, prof., otv. red.; ZOLOTOV, P.F., red. izd-va; VOLLOVA, V.V., tekhn. red.

[Formation of the relief and frozen rocks in the coastal area of eastern Antarctica] Formirovanie rel'efa i merzlykh gornykh porod poberezh'ia Vostochnoi Antarktidy. Moskva, Izd-vo Akad. nauk SSSR, 1962. 147 p. (MIRA 15:2)

1. Direktor Instituta merzlotovedeniya im. V.A.Obrucheva AN SSSR (for Shumskiy).
(Bunger Hills region, Antarctica—Geology)

SHUMSKIY, P. A.

"Ice of the earth and its present changes."

Report submitted to the Symposium on Results of the IGY-IGC (Intl. Geophysical Year) Los Angeles, California 12-16 Aug 1963

SHUMSKIY, Petr Aleksandrovich, VTYURIN, B. A.,

"Underground ice"

report to be submitted for the Intl. Conference on Permafrost, Purdue Univ., Lafayette, Indiana, 11-15 Nov 63